Abstract of the Invention

A cooled fluid flow component for a combustion engine which directs cooling fluid through complementary guided-flow regions to ensure effective cooling of the component tip end, without producing overcooled regions. The component includes multiple channels fluidly linked by a first turning zone. A contoured boundary member divides the turning zone into two guided-flow regions which cooperatively ensure that the tip is cooled appropriately. According to one aspect of the invention, the first guided-flow region forms a vortex that cools a region adjacent a channel-dividing partition, while the second guided flow region ensures the region adjacent the component tip is cooled appropriately. A method of cooling a internally-cooled fluid guide component is also provided.